

ring A represents an optionally substituted monocyclic heterocyclic ring containing from 5 to 7 ring atoms, one of which is the nitrogen atom shown, the remaining ring atoms being selected from compatible combinations of carbon, oxygen, sulfur and nitrogen;

X is oxygen or sulfur;

Y is oxygen, sulfur or -NH-;

R is 0, 1, 2 or 3; and

ring B represents an optionally substituted carbocyclic or heterocyclic ring system.

2. (Original) A compound as claimed in claim 1 wherein R is hydrogen.

3. (Currently Amended) A compound as claimed in claim 1 ~~or claim 2~~ wherein R₂ is:

optionally substituted C₁-C₈ alkyl, C₃-C₆ alkenyl, C₃-C₆ alkynyl or cycloalkyl;

phenyl (C₁-C₆ alkyl)-, phenyl (C₃-C₆ alkenyl)- or phenyl (C₃-C₆ alkynyl)- optionally substituted in the phenyl ring;

cycloalkyl (C₁-C₆ alkyl)-, cycloalkyl (C₃-C₆ alkenyl)- or cycloalkyl (C₃-C₆ alkynyl)- optionally substituted in the cycloalkyl ring;

heterocyclyl (C₁-C₆ alkyl)-, heterocyclyl (C₃-C₆ alkenyl)- or heterocyclyl (C₃-C₆ alkynyl)- optionally substituted in the heterocyclyl ring; or

CH₃(CH₂)_pO(CH₂)_q- or CH₃(CH₂)_pS(CH₂)_q-, wherein p is 0, 1, 2 or 3 and q is 1, 2 or

3.

4. (Currently Amended) A compound as claimed in claim 1 ~~or claim 2~~ wherein R₂ is methyl, ethyl, n-or iso-propyl, n- or iso-butyl, n-pentyl, iso-pentyl 3-methyl-but-1-yl, n-hexyl, n-heptyl, n-acetyl, n-octyl, methylsulfanylethyl, ethylsulfanylmethyl, 2-methoxyethyl, 2-

ethoxyethyl, 2-ethoxymethyl, 3-hydroxypropyl, allyl, 3-phenylprop-3-en-1-yl, prop-2-yn-1-yl, 3-phenylprop-2-yn-1-yl, 3-(2-chlorophenyl)prop-2-yn-1-yl, but-2-yn-1-yl, cyclopentyl, cyclohexyl, cyclopentylmethyl, cyclopentylethyl, cyclopentylpropyl, cyclohexylmethyl, cyclohexylethyl, cyclohexylpropyl, furan-2-ylmethyl, furan-3-methyl, tetrahydrofuran-2-ylmethyl, tetrahydrofuran-2-ylmethyl, piperidinylmethyl, phenylpropyl, 4-chlorophenylpropyl, 4-methylphenylpropyl, 4-methoxyphenylpropyl, benzyl, 4-chlorobenzyl, 4-methylbenzyl, or 4-methoxybenzyl.

5. (Currently Amended) A compound as claimed in claim 1 ~~or claim 2~~ wherein R₂ is (C₁-C₆) alkyl-, cycloalkylmethyl-, (C₁-C₃)alkyl-S-(C₁-C₃)alkyl-, or (C₁-C₃)alkyl-O-(C₁-C₃)alkyl-, especially ~~n-propyl, n-butyl, n-pentyl, cyclopentylmethyl, cyclopentylethyl, cyclohexylmethyl or cyclohexylethyl.~~

6. (Currently Amended) A compound as claimed in ~~any of the preceding claims~~ claim 1 wherein R₄ is:

the characterising group of a natural α amino acid, ~~for example benzyl,~~ or 4-methoxyphenylmethyl, in which any functional group may be protected, any amino group may be acylated and any carboxyl group present may be amidated; or

a group-[Alk]_nR₉ where Alk is a (C₁-C₆) alkylene or (C₂-C₆)alkenylene group optionally interrupted by one or more -O-, or -S- atoms or -N(R₁₂)- groups [where R₁₂ is a hydrogen atom or a (C₁-C₆) alkyl group], n is 0 or 1, and R₉ is hydrogen or an optionally substituted phenyl, aryl, heterocyclyl, cycloalkyl or cycloalkenyl group or (only when n is 1) R₉ may additionally be hydroxy, mercapto, (C₁-C₆)alkylthio, amino, halo, trifluoromethyl, nitro, -COOH, -CONH₂, -COOR^A, -NHCOR^A, -CONHR^A, -NHR^A, -NRAR^B, or -CONR^AR^B wherein R^A and R^B are independently a (C₁-C₆)alkyl group; or

a benzyl group substituted in the phenyl ring by a group of formula -OCH₂COR₈ where R₈ is hydroxyl, amino, (C₁-C₆) alkoxy, phenyl(C₁-C₆)alkoxy, (C₁-C₆)alkylamino, di(C₁-C₆)alkylamino, phenyl(C₁-C₆)alkylamino; or

a heterocyclic(C₁-C₆)alkyl group, either being unsubstituted or mono- or di-substituted in the heterocyclic ring with halo, nitro, carboxy,(C₁-C₆)alkoxy, cyano, (C₁-C₆)alkanoyl, trifluoromethyl(C₁-C₆)alkyl, hydroxy, formyl, amino,(C₁-C₆)alkylamino, di-(C₁-C₆)alkylamino, mercapto, (C₁-C₆)alkylthio, hydroxy(C₁-C₆)alkyl, mercapto(C₁-C₆)alkyl or (C₁-C₆)alkylphenylmethyl; or

a group-CR_aR_bR_c in which:

each of R_a, R_b and R_c is independently hydrogen, (C₁- C₆)alkyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, phenyl (C₁-C₆)alkyl, (C₃-C₈)cycloalkyl; or

R_c is hydrogen and R_a and R_b are independently phenyl or heteroaryl such as pyridyl; or

R_c is hydrogen, (C₁- C₆)alkyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, phenyl(C₁-C₆)alkyl, or (C₃-C₈)cycloalkyl, and R_a and R_b together with the carbon atom to which they are attached form a 3 to 8 membered cycloalkyl or a 5-to 6-membered heterocyclic ring; or

R_a, R_b and R_c together with the carbon atom to which they are attached form a tricyclic ring (for example adamantyl); or

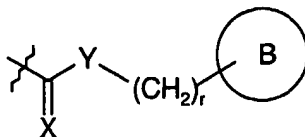
R_a and R_b are each independently (C₁-C₆)alkyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, phenyl(C₁-C₆) alkyl, or a group as defined for R_c below other than hydrogen, or R_a and R_b together with the carbon atom to which they are attached form a cycloalkyl or heterocyclic ring, and R_c is hydrogen, -OH, -SH, halogen, -CN, -CO₂H, (C₁-C₄)perfluoroalkyl, -CH₂OH, -CO₂(C₁-C₆)alkyl, -O(C₁-C₆)alkyl, -O(C₂-C₆)alkenyl, -S(C₁- C₆)alkyl, -SO(C₁- C₆)alkyl, - SO₂(C₁-C₆)alkyl, -S(C₂-C₆) alkenyl, -SO(C₂-C₆) alkenyl, -SO₂(C₂-C₆) alkenyl or a group-Q-W wherein Q represents a bond or -O-, - S-, -SO- or -SO₂- and W represents a phenyl, phenylalkyl, (C₃-C₈) cycloalkyl, (C₃-C₈)cycloalkylalkyl, (C₄- C₈)cycloalkenyl, (C₄-C₈)cycloalkenylalkyl, heteroaryl or heteroarylalkyl

group, which group W may optionally be substituted by one or more substituents independently selected from, hydroxyl, halogen, -CN, -CO₂H, -CO₂(C₁-C₆)alkyl, -CONH₂, -CONH(C₁-C₆)alkyl, -CONH(C₁-C₆alkyl)₂, -CHO, -CH₂OH, (C₁-C₄)perfluoroalkyl, -O(C₁-C₆)alkyl, -S(C₁-C₆)alkyl, -SO(C₁-C₆)alkyl, -SO₂(C₁-C₆)alkyl, -NO₂, -NH₂, -NH(C₁-C₆)alkyl, N((C₁-C₆)alkyl)₂, -NHCO(C₁-C₆)alkyl, (C₁-C₆)alkyl, (C₂-C₆)alkenyl, (C₂-C₆)alkynyl, (C₃-C₈)cycloalkyl, (C₄-C₈)cycloalkenyl, phenyl or benzyl.

7. (Currently Amended) A compound as claimed in ~~any of claims 1 to 5~~ claim 1 wherein R₄ is methyl, ethyl, benzyl, 4-chlorobenzyl, 4-hydroxybenzyl, phenyl, cyclohexyl, cyclohexylmethyl, pyridine-3-ylmethyl, tert-butoxymethyl, naphthylmethyl, iso-butyl, sec-butyl, tert-butyl, 1-benzylthio-1-methylethyl, 1-methylthio-1-methylethyl, 1-mercapto-1-methylethyl, 1-methoxy-1-methylethyl, 1-hydroxy-1-methylethyl, 1-fluoro-1-methylethyl, hydroxymethyl, 2-hydroxyethyl, 2-carboxyethyl, 2-methylcarbomylethyl, 2-carbamylethyl, or 4-aminobutyl.

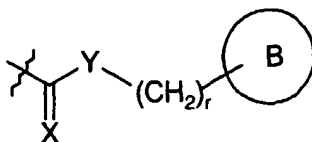
8. (Currently Amended) A compound as claimed in ~~any of claims 1 to 5~~ claim 1 wherein R₄ is tert-butyl, iso-butyl, benzyl, isopropyl or methyl.

9. (Currently Amended) A compound as claimed in ~~any of the preceding claims~~ claim 1 wherein ring A is optionally substituted 1-pyrrolidinyl, piperidin-1-yl, 1-piperazinyl, hexahydro-1-pyridazinyl, morpholin-4-yl, tetrahydro-1,4-thiazin-4-yl, tetrahydro-1,4-thiazin-4-yl 1-oxide, tetrahydro-1,4-thiazin-4-yl 1,1-dioxide, hexahydroazipino, thiomorpholino, diazepino, thiazolidinyl or octahydroazochino.



10. (Currently Amended) A compound as claimed in ~~any of claims 1 to 8~~ claim 1 wherein ring A is piperidin-1-yl or 1-piperazin-4-yl.

11. (Currently Amended) A compound as claimed in ~~any of the preceding claims~~ claim 1 wherein the grouping

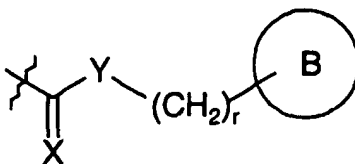


present in compounds(I) is attached to a ring carbon atom or a second ring nitrogen atom of ring A.

12. (Currently Amended) A compound as claimed in ~~any of the preceding claims~~ claim 1 wherein r is 0 or 1.

13. (Currently Amended) A compound as claimed in ~~any of the preceding claims~~ claim 1 wherein ring B is optionally substituted phenyl, 2-, 3- or 4-pyridyl, 9H-fluoren-9-yl, naphthyl, or 4-benzo[1,3]dioxol-5-yl.

14. (Currently Amended) A compound as claimed in ~~any of the preceding claims~~ claim 1 wherein in the grouping



present in compounds(I), X is oxygen or sulphur when Y is -NH-, or both X and Y are oxygen.

15. (Canceled)

16. (Canceled)

17. (Currently Amended) A method for the treatment of microbial infections in humans and

nonhuman mammals, which comprises administering to a subject suffering such infection an antimicrobially effective dose of a compound as claimed in ~~any of claims 1 to 15~~claim 1.

18. (Currently Amended) An antimicrobial composition comprising a compound as claimed in ~~any of claims 1 to 15~~claim 1 together with a pharmaceutical acceptable carrier.

19. (New) A compound as claimed in claim 5 wherein R₂ is n-propyl, n-butyl, n-pentyl, cyclopentylmethyl, cyclopentylethyl, cyclohexylmethyl or cyclohexylethyl

20. (New) A compound as claimed in claim 2 wherein R₂ is:

optionally substituted C₁-C₈ alkyl, C₃-C₆ alkenyl, C₃-C₆ alkynyl or cycloalkyl;

phenyl (C₁-C₆ alkyl)-, phenyl (C₃-C₆ alkenyl)- or phenyl (C₃-C₆ alkynyl)- optionally substituted in the phenyl ring;

cycloalkyl (C₁-C₆ alkyl)-, cycloalkyl (C₃-C₆ alkenyl)- or cycloalkyl (C₃-C₆ alkynyl)- optionally substituted in the cycloalkyl ring;

heterocyclyl (C₁-C₆ alkyl)-, heterocyclyl (C₃-C₆ alkenyl)- or heterocyclyl (C₃-C₆ alkynyl)- optionally substituted in the heterocyclyl ring; or

CH₃ (CH₂)_pO(CH₂)_q- or CH₃(CH₂)_pS(CH₂)_q-, wherein p is 0, 1, 2 or 3 and q is 1, 2 or

3.

21. (New) A compound as claimed in claim 2 wherein R₂ is methyl, ethyl, n-or iso-propyl, n-or iso-butyl, n-pentyl, iso-pentyl 3- methyl-but-1-yl, n-hexyl, n-heptyl, n-acetyl, n-octyl, methylsulfanylethyl, ethylsulfanylmethyl, 2-methoxyethyl, 2-ethoxyethyl, 2-ethoxymethyl, 3-hydroxypropyl, allyl, 3-phenylprop-3-en-1-yl, prop-2-yn-1-yl, 3- phenylprop-2-yn-1-yl, 3-(2-chlorophenyl)prop-2-yn-1-yl, but-2-yn-1-yl, cyclopentyl, cyclohexyl, cyclopentylmethyl, cyclopentylethyl, cyclopentylpropyl, cyclohexylmethyl, cyclohexylethyl, cyclohexylpropyl, furan-2-ylmethyl, furan-3-methyl, tetrahydrofuran-2-ylmethyl, tetrahydrofuran-2-ylmethyl,

piperidinylmethyl, phenylpropyl, 4- chlorophenylpropyl, 4-methylphenylpropyl, 4-methoxyphenylpropyl, benzyl, 4-chlorobenzyl, 4-methylbenzyl, or 4-methoxybenzyl.

22. (New) A compound as claimed in claim 2 wherein R_2 is $(C_1 - C_6)$ alkyl-, cycloalkylmethyl-, $(C_1 - C_3)$ alkyl-S- $(C_1 - C_3)$ alkyl-, or $(C_1 - C_3)$ alkyl-O- $(C_1 - C_3)$ alkyl-.